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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,706	02/25/2000	Paul F. Lodrige	SUN1P398/P4612	7285

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EXAMINER

TRUONG, LECHI

ART UNIT	PAPER NUMBER
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2126

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DATE MAILED: 05/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

314

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/513,706	LODRIGE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	LeChi Truong	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 February 2000.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 10-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. This is in response to the amendment filed 3/3/03, the claims 7-9 were canceled, claims 1-3, 5,6, 11, 16 and 17 were amendment, new claims 21, 22 were added.

#### *Claim Rejections - 35 USC § 103*

2. Claims 1-4, 10, 11, 16-18, 21, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admit prior Art (APA) (page 1-3) in view of AIX Version 4.3 Communications Programming Concepts.

**As to claim 1**, APA teaches a first message, second message (instances messages, page 3, ln 9-10), a first thread, a second thread (two or more threads, page 3, ln 9-11), the two software modules (a stream module, page 3, ln 9-13), a first processor, a second processor (different processors, page 3, ln 9-11), the synchronization queue (synchronization queue, page 2, ln 25-30 to page 4, ln 1-5).

APA does not teach propagating a first message to or from a synchronization queue while allowing a second thread to propagate a second message between the software modules. However, AIX teaches in stream synchronization, a multi-thread environment, several threads may access the same stream, the same module, or the same queue at the same time. Stream use a synchrononization-queueing (stream synchronization, page 1-4)

It would have been obvious to apply the teaching of AIX to APA in order to ensure that no data inconsistency may occur when two different threads from multi- thread environment can access the upstream and down stream at the same time.

**As to claim 2**, APA teaches respective portions of first a second message (instances messages, page 3, ln 9-11).

APA does not teach concurrently propagate a first and second messages to or from a synchronization queue. However, AIX teaches in stream synchronization, a multi-thread environment, several threads may access the same stream, the same module, or the same queue at the same time. Stream use a synchoronization-queueing (stream synchronization, page 1-4)

It would have been obvious to apply the teaching of AIX to APA in order to ensure that no data inconsistency may occur when two different threads from multi- thread environment can access the upstream and down stream at the same time.

**As to claim 3**, APA teaches the second thread (one single thread, page 3, ln 15-23), the first message, second message (messages, page 3, ln 15-23), two software modules (the STREAMS model, page 3, ln 15-23), the first thread (all the threads, page 3, ln 15-23).

**As to claim 4**, APA teaches a lock (queue lock, page 3, ln 15-23).

**As to claim 10**, APA teaches the two software modules (stream modules 104 and 106, page 2, ln 1-4), a stack as STREAM modelers (a STREAMS, page 2, ln 1-16).

**As to claim 11**, APA teaches first and second software modules (the stream modules 104 and 106, page 2, ln 17-24), main queue (a down-queue 112, page 2, ln 17-24), messages (messages (data), page 2, ln 17-24), an auxiliary queue (synchronization queue 116, page 3, ln 1-2), processors (two or more threads (or processes, page 3, ln 9-11).

APA does not teach a propagation controller operating to enable at least two processors... to concurrently propagate message to or form the auxiliary queue of the second software module. However, AXI teaches in stream synchronization, a multi-thread environment, several threads may access the same stream, the same module, or the same queue at the same time. Stream use a synchoronization-queueing (stream synchronization, page 1-4)

**As to a computer system of claim 16**, see the rejection of claim 10.

**As to a computer readable media of claim 17**, refer to the rejection of claim 1. Further APA teaches computer program code (an application, page 2, ln 11-12).

**As to a computer readable media of claim 18**, see the rejection of claim 2.

**As to claim 21**, APA teaches a second thread (two or more threads, page 3, ln 9-11), second message (instances messages, page 3, ln 9-10), the first synchronization queue (synchronization queue, page 2, ln 25-30 to page 4, ln 1-5).

**As to claim 22**, APA teaches a second thread (two or more threads, page 3, ln 9-11), second message (instances messages, page 3, ln 9-10), the first synchronization queue (synchronization queue, page 2, ln 25-30 to page 4, ln 1-5), the second synchronization (queue 120, Fig.1).

2. Claims **5,6, 14, 15, 19, 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Admit prior Art (APA) (page 1-3) in view of AIX Version 4.3 Communications Programming Concepts and further in view of Obermarck et al( US Patent: 4,847,754).

**As to claim 5**, APA does not teach first indicator for the first processor, indicate ...first processor, the first processor is not propagating. However, Obermarck teaches excess, message buffer capacity /credit / the consumer logic 30 (col 5, ln 23-56) for concurrent propagation of data between software modules/RSV (col 4, ln 26-50).

It would have been obvious to apply the teaching of Obermarck to APA in order to provide simultaneous access to shared resources among concurrently executing processes.

**As to claim 6**, APA does not explicit teach determining an event, being processed, pending to be processed, determining a thread-count. However, Obermarck teaches the condition

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(col 1, ln 38-46), test RSV to determine whether another process has gained concurrently use of the resource, col 3, ln 15-23), locks, unlocks (col 1, ln 40-61), an indication of credit (col 5, ln 23-68), the apply counter (APPCNTR) (col 6, ln 19-20, ln 41-44) for concurrent propagation of data between software modules.

It would have been obvious to apply the teaching of Obermarck to APA in order to provide simultaneous access to shared resources among concurrently executing processes.

**As to claim 14**, APA teaches the first software (module 1, fig 1), the second software (module 2, Fig 1), the auxiliary queue (120, Fig 1), a message (messages, page 2, ln 25-30), two processors of said plurality of processors (two or more threads (or processes) running on different processors, page 3, ln 10-15.

APA does not teach processors concurrently propagate a message. However, Obermarck teaches another process has gained concurrent use of the resource (col 4, ln 27-50) for concurrent propagation of data between software modules.

It would have been obvious to apply the teaching of Obermarck to APA in order to provide simultaneous access to shared resources among concurrently executing processes.

**As to claim 15**, teaches the first software (module 1, fig 1), the second software (module 2, Fig 1), the main queue (a pair of queues, page 2, ln 17-20), a message (messages, page 2, ln 25-30), two processors of said plurality of processors (two or more threads (or processes) running on different processors, page 3, ln 10-15.

APA does not teach processors concurrently propagate a message. However, Obermarck teaches another process has gained concurrent use of the resource (col 4, ln 27-50) for concurrent propagation of data between software modules.

It would have been obvious to apply the teaching of Obermarck to APA in order to provide simultaneous access to shared resources among concurrently executing processes.

**As to a computer readable media of claim 19**, see the rejection of claim 5.

**As to a computer readable media of claim 20**, see the rejection of claim 10.

3. Claims **12, 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Admit prior Art (APA) in view of AIXVersion 4.3 Communications Programming Concepts and further in view of Heller et al (US. patent 5,404,562).

**As to claim 12**, APA does not teach a thread-count. However, Obermarck teaches the apply counter (APPCNTR) (col 6, ln 19-20, ln 41-44) for concurrent propagation of data between software modules.

It would have been obvious to apply the teaching of Obermarck to APA in order to provide simultaneous access to shared resources among concurrently executing processes.

APA does not teach a queue count. However, Heller teaches a counter 1907 (col 18, ln 48-49) for concurrent propagation of data between software modules.

It would have been obvious to apply the teaching of Obermarck to APA in order to count the number of coherence control requests and to store a value which the control requests to the shared data.

**As to claim 13**, APA teaches the synchronization queue ("synchronization queue", page 2, ln1/ 116, Fig 1).

APA does not teach a queue count. However, Heller teaches a counter 1907 (col 18, ln 48-49) for concurrent propagation of data between software modules.

It would have been obvious to apply the teaching of Obermarck to APA in order to count the number of coherence control requests and to store a value which control request to shared data.

### **Response to Argument**

5. Applicant's arguments filed 3/3/03 have been considered but are moot in view of the new ground(s) of rejection. Applicant amended the claims to recite, " propagating a first message to or from a first synchronization queue while allowing a second thread to propagate a second message between the software modules" thus, requiring new grounds of rejection of AIX Version 4.3 Communications Programming Concepts (AIX)'s reference meets amended claims.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (703) 305 5312. The examiner can normally be reached on 8 - 5PM.

Fax phone: AFTER\_FINAL faxes must be signed and sent to: (703) 746-2738, OFFICAL faxes must be signed and send to: (703) 746-7239, NON OFFICIAL faxes should not be signed, please send to: (703) 746-7240

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 9000.

LeChi Truong  
May 19, 2003

*Sue Lao*